

## WHAT IS CLAIMED IS:

1. A copolymer comprising units derived from ethylene and 1-heptene wherein the peak force at break per millimeter of film thickness  $P$  of a blown film made of the copolymer satisfies the following relationship:

$$5 \quad P > 1.9 C - 127 \quad (1)$$

wherein  $P$  is expressed in N/mm and determined on a 50 micrometer thick blown film according to ASTM-D5748-95 ; and

$C$  is given by the relationship  $C = D(1-CFW)$ , wherein  $D$  is the density of the copolymer measured in  $\text{kg/m}^3$  according to ASTM-D-792 and CFW is the weight fraction of the copolymer having a crystallization point of  $75^\circ\text{C}$  or higher as determined using crystallization analysis fractionation, and  $C$  is greater than or equal to 550.

2. The copolymer of claim 1 wherein  $P$  satisfies the following relationship:

$$15 \quad P > 2.7 C - 563 \quad (1a)$$

wherein  $P$  and  $C$  have the same meanings as in formula 1 in claim 1.

3. The copolymer of claims 1 wherein  $P$  satisfies the following relationships:

$$P > 3.4 C - 944 \quad (1b)$$

wherein  $P$  and  $C$  have the same meanings as in formula 1 in claim 1.

4. A copolymer according to any of the claims 1-3 wherein the density  $D$  is from 890 to  $935 \text{ kg/m}^3$  and the melt index as measured according to ASTM-D-1238 Procedure A, Condition E at  $190^\circ\text{C}/2.16 \text{ kg}$  is from 0.3 to 25 g/10 min.

5. A copolymer according to claim 4 wherein the density  $D$  is from 895 to  $930 \text{ kg/m}^3$ .

6. A copolymer according to claim 5 wherein the density  $D$  is from 901 to  $928 \text{ kg/m}^3$ .

7. A copolymer according to any of the claims 4-6 wherein the melt index is from 0.5 to 10 g/10 min.

8. A copolymer according to any of the claims 1-7 wherein the fraction CFW is from 0 to 0.5.

9. A composition comprising a copolymer of any of the claims 1-8.

10. An article prepared from or containing a copolymer of any of the claims 1-8 or a composition of claim 9.
11. An article of claim 10 which is a film.
12. An article of claim 11 which is a packaging film